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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,950	07/14/2003	David K. Murotake	SCA21-US	6413
24222 7590 01/11/2007 MAINE & ASMUS 100 MAIN STREET P O BOX 3445 NASHUA, NH 03061-3445			EXAMINER YANCHUS III, PAUL B	
			ART UNIT 2116	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/618,950	MUROTAKE, DAVID K.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Paul B. Yanchus	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/26/04, 7/23/04</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

Claim 2 is objected to because of the following informalities: It appears that “modem” is a typographical error in line 2 of claim 2. For examination purposes it is assumed that “modem” should be “modulation.” Appropriate correction is required.

Claims 14-17 are objected to because of the following informalities: It appears that claims 14-17 were intended to be dependent off of claim 13 instead of claim 12. For examination purposes it is assumed that claims 14-17 are dependant off of claim 13. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 6 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Auckland et al., US Patent Application Publication no. 2002/0183013 [Auckland]<sup>1</sup>.

Regarding claim 1, Auckland discloses a self-booting software defined radio (SDR) module that interfaces with a host system, said module comprising:

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<sup>1</sup> cited in IDS filed on 7/23/04.

a modulation/demodulation section with a stored run-time kernel, wherein a processing unit of said modulation/demodulation section executes said run time kernel [control circuit, paragraph 0143];

an interface mechanism coupling said host system to said module, wherein said host system provides a set of reconfiguration information [paragraphs 0150-0153]; and

a front end unit receiving communications signals and processing said communications signals using said reconfiguration information [receive circuit, paragraphs 0141-0142].

Regarding claims 2 and 3, Auckland further discloses that the control circuit comprises a memory unit [paragraph 0143].

Regarding claim 5, it is inherent that the control circuit would comprise a high speed fabric to couple the processing circuitry and memory.

Regarding claim 6, Auckland further discloses that the communications signals are selected from CDMA and TDMA.

Regarding claim 9, Auckland further discloses that the front end comprises a radio frequency port and a transceiver coupled to the port [paragraphs 0141 and 0145 and Figure 17].

Regarding claim 10, Auckland further discloses that the reconfiguration information may be received as a radio signal [paragraph 0152].

Regarding claim 11, Auckland further discloses an antenna coupled to the front end [column 0141 and Figure 17].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 7 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auckland et al., US Patent Application Publication no. 2002/0183013 [Auckland].

Regarding claims 4, 13, 15 and 17-20, Auckland as described above discloses a radio module comprising Auckland does not disclose that the front end unit comprises a multi-port crossbar. However, multi-port crossbars on radio modules are well known and it would have been obvious to one of ordinary skill in the art to include a well known multi-port cross bar on the front end of the Auckland radio.

Regarding claims 7 and 8, Auckland discloses that the reconfiguration information may be entered via wireline connection to the radio module [paragraph 0150]. Auckland is silent as to what type of wireline connection is used. It would have been obvious to one of ordinary skill in the art to use well known USB or Firewire as the wireline connection in the Auckland radio.

Regarding claims 12 and 16, Auckland discloses that the receive circuitry is software programmable, but is silent as to the specific architecture of the circuitry. It would have been obvious to one of ordinary skill in the art to use well known FPGA or PLD circuit as the software programmable hardware architecture in the Auckland radio.

Regarding claim 14, Auckland further discloses an antenna coupled to the front end [column 0141 and Figure 17].

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B. Yanchus whose telephone number is (571) 272-3678. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Yanchus  
January 5, 2007

  
REHANA PERVEEN  
SUPERVISORY PATENT EXAMINER  
1/8/2007